

WHAT IS CLAIMED IS:

1. A vascular filter, comprising:

a filter body sized for deployment in a blood vessel; and

an agitation member movably coupled to the filter body;

5 wherein movement of the agitation member acts to break apart particles captured within the filter body.

2. The vascular filter of Claim 1, wherein the filter body is provided with anchoring elements for engagement with an inner wall of the blood vessel.

10 3. The vascular filter of any of Claims 1 or 2, further comprising a flow-receiving member for causing the agitation member to rotate relative to the filter body.

4. The vascular filter of Claim 3, wherein the agitation member is capable of reversing direction.

15 5. The vascular filter of any of Claims 1–4, further comprising an elongate drive mechanism configured for removable attachment to the agitation member for causing the agitation member to rotate.

6. The vascular filter of any of Claims 1–4, further comprising a clutch mechanism such that the agitation member only moves relative to the filter body when a particle is trapped within the filter body.

20 7. The vascular filter of any of Claims 1–6, wherein the filter body further comprises inwardly protruding members that cooperate with the agitation member to break down the particle.

8. The vascular filter of any of Claims 1–7, wherein the filter body is self-expanding.

25 9. The vascular filter of any of Claims 1–7, wherein the filter body is balloon expandable.

10. The vascular filter of any of Claims 1–9, wherein the filter body is coated with an anti-coagulant material.

30 11. The vascular filter of any of Claims 1–10, wherein the agitation member vibrates.

12. The vascular filter of Claim 11, wherein the agitation member vibrates at ultrasonic frequencies.

35 13. The vascular filter of any of Claims 1–12, further comprising an energy storage device coupled to the agitation member for producing movement of the agitation member.

14. The vascular filter of any of Claims 1–10, wherein the agitation member emits a pressurized fluid flow.

15. The vascular filter of any of Claims 1–10, further comprising an aspiration catheter.

5 16. A method of making a vascular filter of any of Claims 1–14, the method comprising:

providing a filter body sized for capturing particles from the blood; and

coupling an agitation member to the filter body, wherein the agitation member is rotatable relative to the filter body.

10 17. A method of filtering particles from blood in a blood vessel, comprising:

providing a vascular filter of any of Claims 1–14;

collapsing the vascular filter;

inserting the vascular filter into a lumen of a delivery catheter;

15 introducing the delivery catheter into the blood vessel;

deploying the vascular filter from a distal end of the delivery catheter at a desired location within the blood vessel; and

causing the agitation member to move relative to the filter body for emulsifying a particle trapped within the filter body.